Health by Numbers

Rhode Island Department of Health
Patricia A. Nolan, MD, MPH, Director

Office of Health Statistics
Turning numbers into knowledge
www.healthri.org

Vol. 4, No. 1 January 2002 Edited by Jay S. Buechner, PhD

Rhode Island Hispanics Have Mainstream Cancer Rates

John P. Fulton, PhD and Jay S. Buechner, PhD

The 2000 US Census enumerated more than 85,000 persons in Rhode Island who self-identified as Hispanic, representing about 8.5% of the state's total population and comprising the state's largest racial or ethnic minority group. Producing regular health statistics for Hispanics is challenging because ethnicity is difficult to measure in health surveillance systems of even the best design. Here we have evaluated the ability of two major surveillance systems, the Rhode Island Cancer Registry and the Vital Records death certificate file, to measure cancer morbidity and mortality among resident Hispanics.

Methods. Because Census Bureau inter-censal estimates of the number of resident Rhode Island Hispanics were inconsistent with counts from the 2000 Census, new inter-censal estimates were constructed for resident Rhode Island Hispanics by year, sex, and age group for the years 1989-1998, using linear interpolation and extrapolation from 1990 and 2000 Census counts.

Data on resident cancer cases and deaths identified as Hispanic were extracted from Cancer Registry case reports and from Vital Records death certificates for the ten years 1989-1998 and aggregated by age group, sex, and year of event.

Alternative counts of cases and deaths for resident Rhode Island Hispanics were estimated using a validated U.S. Census technique for identifying Hispanics by surname.[1] For resident males, data on surname from cancer case reports and from death certificates with cancer as the cause of death for the years 1989-1998 were searched for any of "639 most frequently occurring heavily Hispanic surnames" identified by the Bureau of the Census. ("Heavily Hispanic" means that 75 percent or more of the people with a particular surname self-identified as Hispanic on the survey.) For resident females, data on father's surname from death certificates with cancer as the cause of death for the years 1989-1998 were searched for any of the 639 names. (Data on father's surname are not available on Rhode Island Cancer Registry case reports.)

Synthetic aggregates of Hispanic cancer cases and cancer deaths were created by adding the additional cases and deaths classified as Hispanic on the basis of the surname analysis to those deaths identified as Hispanic in case reports and on death certificates. These estimates were combined with the estimates of the Hispanic population of Rhode Island for 1989-1998 to construct age-adjusted cancer incidence rates (males only) and age-adjusted cancer mortality rates (males and females). The year 2000 standard U.S. population was used for age-adjustment.

The synthetic aggregates of Hispanic cancer cases were also used to examine the proportion of cancer cases by anatomic site, comparing them with similar data for the Rhode Island population as a whole.

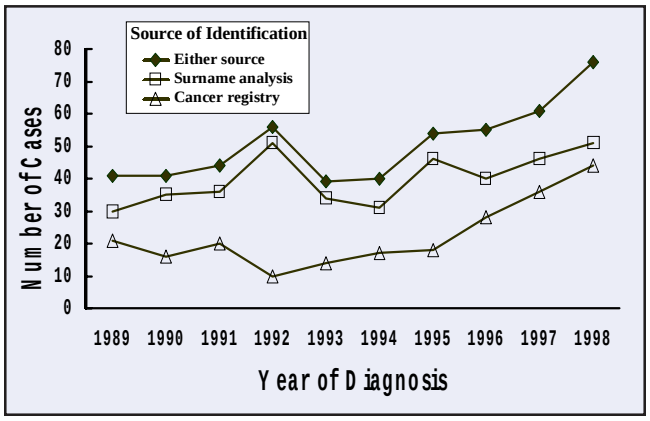

Figure 1. *Number of Diagnosed Cases of Cancer among Hispanic Males, by Year and Source of Hispanic Identification, Rhode Island, 1989-1998.*

Results. Over the ten-year period examined, a total of 507 diagnosed cases of cancer were identified among Hispanic males, identified either from case reports or from the surname analysis. Of these, 224 (44.2%) were identified from case reports, and an additional 283 (55.8%) were identified only by Hispanic surname. By year, aggregation of cases from the two methods more than doubled the number of cases originally reported to the Cancer Registry as Hispanic in each of the first eight years of observation, and enhanced case counts substantially in 1997 and 1998 as well. (Figure 1) The number of cancer deaths among Hispanic males and females during this period showed similar enhancements from the sur-

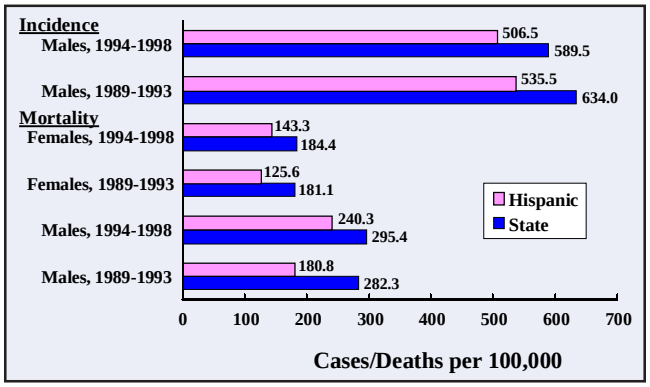

Figure 2. *Age-adjusted Cancer Incidence and Mortality Rates per 100,000 Population, Hispanics and All Residents, by Sex and Year (Grouped), Rhode Island, 1989-1993 and 1994-1999.*

name analysis.

Figure 2 presents age-adjusted cancer incidence and mortality rates for resident Rhode Island Hispanic males and age-adjusted cancer mortality rates for resident Rhode Island Hispanic females in 1989-1993 and in 1994-1998, along with comparable rates for the state as a whole. In all comparisons, Hispanics have age-adjusted cancer rates that fall near but below age-adjusted cancer rates for the state as a whole.

The three most frequently occurring cancers by anatomical site during 1994-1998 were the same for Hispanic males in Rhode Island as for all males: prostate; lung and bronchus; and colon and rectum. (Figure 3) Among other major cancer sites, resident Hispanic males were more likely than resident males overall to develop cancers of the stomach and liver and leukemias, and less likely than resident males overall to develop cancer of lung and bronchus and of the urinary bladder. Patterns for the period 1989-1993 were similar.

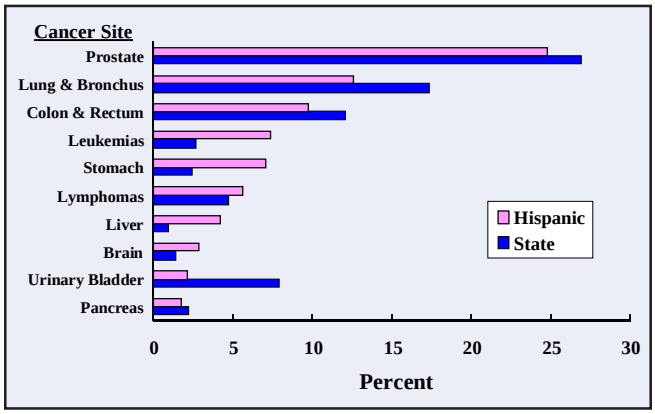

Figure 3. *Anatomic Site of Diagnosed Cases of Cancer among Hispanic Males and among All Males, Rhode Island, 1994-1998.*

Discussion. This analysis of data on cancer incidence and mortality among Hispanic Rhode Island residents supports conclusions concerning both patterns of disease and the reliability of the underlying data.

- The use of an authoritative list of Hispanic surnames to augment Hispanic origin information on cancer registry case reports and death certificates approximately doubles the number of cancer cases that are presumably Hispanic in each of the two databases. Thus, these reporting systems are substantially understating the extent of cancer in this population.

- Based on the rates produced from the synthetic aggregates, Hispanic cancer rates are generally similar to statewide cancer rates for all sites.

- The site distribution for cancer incidence among male Hispanics follows the statewide distribution with two divergences worth noting. The observed higher proportions of stomach and liver cancers may be linked to the dietary patterns and infectious disease patterns (e.g., Hepatitis B) in developing countries and in immigrants from those countries. The high proportion of leukemias is consistent with a population whose age distribution is heavily weighted towards the very young.

Healthy People 2010 set a national goal of eliminating health disparities, in particular among disadvantaged racial and ethnic populations.[2] To support the accomplishment of this sweeping goal, public health surveillance data must have accurate and consistent reporting of race and ethnicity. The Rhode Island Department of Health has recently revised its policy on the collection of data on race and ethnicity and intends to improve the quality of the collected data as the changes in policy are implemented.[3] The findings of this analysis show the clear need for such quality improvement efforts.

John P. Fulton, PhD, is Associate Director, Division of Disease Prevention and Control, Rhode Island Department of Health and Clinical Associate Professor of Community Health, Brown Medical School.

Jay Buechner, PhD, is Chief, Office of Health Statistics, Rhode Island Department of Health, and Clinical Assistant Professor of Community Health, Brown Medical School.

References

1. Word DL, Perkins RC. Building a Spanish surname list for the 1990's – a new approach to an old problem. Technical Working Paper No. 13. *U.S. Census Population Division Working Paper Series*, March 1996.

2. US Department of Health and Human Services. *Healthy People 2010: 2nd ed. Understanding and Improving Health and Objectives for Improving Health.* (2 vols.) Washington, DC: US Government Printing Office. November 2000.

3. Buechner J, Brown-Small V. Race, Ethnicity, and Health: A New Data Policy. *Medicine & Health / Rhode Island* 2001;84:248-250.

Originally published in the January 2002 issue of Medicine & Health / Rhode Island

HEALTH

Rhode Island Department of Health
Office of Health Statistics
3 Capitol Hill
Providence, RI 02908

Change service requested
401 222-2550